Purpose

Settled dust samples will provide information about past deposition, unlike air samples, which can only provide information about air concentrations during the sampling period. Dust samples collected with a microvac from porous surfaces reflect a potential for readily releasable asbestos fibers (for current hazard assessment). Inaccessible locations represent the most significant reservoirs of contaminated dusts available for introduction to a living space and are a good indicator of past contamination (for potential contaminant reservoirs).

Porous Surface Sampling

Roberts et al. (1999) determined that the median value of dust loading on 11 carpets before cleaning was 1.3 g/m^2. Lioy et al. (2002) report ranges of dust loadings in homes between 0.05 - 7 g/m^2 for floors, and between < 1 - 63 g/m^2 for rugs. Indoor dust loads on elevated non-porous surfaces such as walls, table tops, counters, etc. receive much of their dust loads from deposition. The mean dustfall rate in 100 American homes in five cities for these non-porous surfaces was estimated to be 0.02 g/day-m^2 (Schaefer et al 1972, quoted in Roberts, Budd, et al. 1992)

Sampling Campaign

It is well documented that soft or porous surfaces such as carpets and upholstery may become sinks and/or reservoirs for particulate contaminants, including fibers. Generally, hard surfaces are less subject to deposition than soft surfaces. We will leverage the differences in surfaces for this sampling campaign. Samples of settled dust will be collected from porous surfaces using widely-accepted micro-vacuum techniques. Porous surfaces include carpet, area rugs, upholstered couches, chairs, ottomans and drapery when furniture and/ or carpet are not available. The micro vacuum technique will also be used on carpets, area rugs, sofas, mattresses and other porous materials. As might be expected, areas that are cleaned on a routine basis are generally associated with lower loads than areas where dust accumulates undisturbed over a period of time.

Selecting Sampling Locations within "*Use Areas*":
Sampling teams will composite10 individual microvac samples, from each "use area" in the basement and over the main floors as follows:

Target areas for *"accessible" porous and hard* surface sampling include, if present and in priority order:

   i) *Area or wall-to-wall carpeting* in an order of most preferred locations:
1. In the main entrance used for access and egress from the home;
2. Carpet in the secondary, less heavily used entrance to the house;
3. Cin the center of the most frequently used play area for children
4. Carpet in the acknowledged or evident route of high traffic flow
   ii) *Upholstered furniture*

iii) *Draperies/curtains* in the living room, which is the primary location if draperies/curtains are to be sampled, and then draperies/curtains in other rooms of the floor;

iv) If no porous surfaces, then kitchen tiles, floor (perimeter of floors including between floor appliances and walls or cabinets);

v) The wall in the most actively used location in the area; if in bedroom adjacent to the head of the bed;

vi) *Kitchen countertops*;

Infrequently accessed porous and hard surfaces include, if present:
1. Window sills
2. The top of door jambs, vent ducts, or hot water pipes;
3. On top of large appliances such as refrigerators, or upright freezers;
4. On top, beneath, or behind large objects of furniture such as bookcases, tall chests or bed canopies.

Inaccessible porous and hard surfaces include, if present:
1. Behind refrigerators or other large infrequently moved objects.

Sample Distribution

The preferred distribution of the 10-sample points among the three target areas described above is as follows:

- 5-sample points collected from **Accessible** target areas

- 3-sample points collected from **Infrequent** target areas

- 2-sample points collected from **Inaccessible** target areas

    Samples will be composited based on use areas. A minimum of one accessible composite and one infrequent/inaccessible composite. In homes with 2 or more levels, composite samples by use areas across 2 floors

Composite Samples	Ranch No basement 2 composites	Ranch w/basement (across both levels)	2-story with basement (basement) (1st & 2nd)	3-story with basement (bsmt &1st) (2nd & 3rd)
Accessible	1	1	2	2
Infrequent/Inaccessible	1	1	2	2